APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/523,379	03/10/2000	Naoto Matsunami	H-907	6045

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TRAN, PHILIP B

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N○ ● 09/523,379	Applicant(s) MATSUNAMI ET AL.
	Examiner Philip B Tran	Art Unit 2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _12/31/2003_.

2a)☒ This action is **FINAL**.　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _18-34_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _18-34_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some * c)☐ None of:

　　　1.☒ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendments

1.   This office action is in response to the amendments filed on 12/31/2003. Claims

1-17 have been canceled. Claims 18-34 have been newly added. Therefore, claims 18-

34 are pending and presented for further examination.

Specification

2.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

3.   The disclosure is objected to because of the following informalities: all pages are

illegible because left portion of every page is unreadable due to faded print.

Appropriate correction is required. A substitute specification may be filed and

must be accompanied by a statement that the substitute specification contains no new

matter.

Claim Objections

4.   Claims 18-22, 24-25 and 29-34 are objected to because of the following

informalities:

Claim 18, line 10, the term "OS" is not clear and needed to be defined. For

example, Operating System (OS).

Claim 19, line 3, the term "OS" is not clear and needed to be defined.

Claim 20, lines 5, 7 and 11, the terms "LUN" are not clear and needed to be

defined.

Claim 20, line 12, the term "OS" is not clear and needed to be defined.

Claim 21, line 2, the term "LUN" is not clear and needed to be defined.

Claim 22, lines 2, 4 and 5, the terms "LUN" are not clear and needed to be defined.

Claim 24, line 8, the term "OS" is not clear and needed to be defined.

Claim 25, line 2, the term "LUN" is not clear and needed to be defined.

Claim 29, line 13, the term "OS" is not clear and needed to be defined.

Claim 30, lines 4, 8 and 17, the terms "LUN" are not clear and needed to be defined.

Claim 30, lines 16 and 18, the terms "ID" are not clear and needed to be defined.

Claim 31, line 4, the terms "LUN" and "ID" are not clear and needed to be defined.

Claim 32, lines 3, 4, 7, 12-13 and 15, the term "LUN" are not clear and needed to be defined.

Claim 32, lines 13-14 and 16, the term "ID" are not clear and needed to be defined.

Claim 33, lines 3-4 and 6-7, the terms "WWN" are not clear and needed to be defined.

Claim 34, lines 2 and 9, the terms "LUN" are not clear and needed to be defined.

Claim 34, lines 4, 7 and 9, the terms "WWN" are not clear and needed to be defined.

Appropriate corrections are required. Abbreviations in parentheses should be

accompanied by the full forms of the terms. For example, Operating System (OS),

Logical Unit (LUN) and World Wide Name (WWN).

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6.   Claims 18-34 are rejected under 35 U.S.C. § 102(e) as being anticipated by

Blumenau et al (Hereafter, Blumenau), U.S. Pat. No. 6,421,711.

Regarding claim 18, Blumenau teaches a computer system comprising :

a plurality of computers (= hosts 22-25) [see Figs. 1-3], each of which comprises

a memory unit having a boot-up control program (= host controller driver program 61-

64) [see Fig. 4 and Col. 31, Lines 35-43]; and

a storage system (= storage subsystem 20 or 50) [see Figs. 1-3] comprising at

least one logical unit (= LUNs 53-56) [see Col. 9, Lines 22-32] and a plurality of

interface control circuits (= ports 35-36 or 51-52) [see Figs. 1-3], coupled to said plurality

of computers (= hosts 22-25) [see Figs. 1-3 and Col. 6, Line 64 to Col. 7, Line 39],

wherein each of said plurality of computers is arranged to execute a boot-up

control program, detect at least one available logical unit in said storage system, and

execute a boot-up process of an OS stored in a detected logical unit (i.e., a host

controller routine first powers up and logs in to the network, then a mapping driver in the

host is loaded into the host's memory, and the host operating system invokes the

mapping driver to obtain the LUNs accessible to it) [see Col. 32, Lines 13-31].

Regarding claim 19, Blumenau further teaches a computer system according to

claim 18, wherein each of said plurality of computers is arranged to make a detected

logical unit containing an OS emulate an internally built-in disk unit by executing the

boot-up control program (i.e., providing the host with capability of using a logical volume

in the storage subsystem as a "boot disk") [see Col. 32, Line 32 to Col. 33, Line 26].

Regarding claim 20, Blumenau further teaches a computer system according to

claim 19, wherein each of said plurality of computers is coupled to said storage system

via a Fibre Channel network (= Fibre channel loops 41-44) [see Fig. 2], said storage

system comprises a plurality of logical units (= LUNs 53-56) [see Col. 9, Lines 22-32]

each of which is associated with an internal LUN used in said storage system for

identifying the logical unit and with a virtual LUN used by one of said plurality of computers for identifying a logical unit which can be accessed from the computer, and each of said plurality of computers uses a predetermined virtual LUN to specify a detected logical unit containing an OS (i.e., a host controller routine first powers up and logs in to the network, then a mapping driver in the host is loaded into the host's memory, and the host operating system invokes the mapping driver to obtain the LUNs accessible to it) [see Col. 29, Lines 18-57 and Col. 32, Lines 13-31].

Regarding claim 21, Blumenau further teaches a computer system according to claim 20, wherein said predetermined virtual LUN is 0 (i.e., zero LUN value) [see Col. 26, Lines 13-27 and Col. 31, Lines 23-26].

Regarding claim 22, Blumenau further teaches a computer system according to claim 20, wherein said storage system further comprises a LUN management table designating mutual correspondences among an internal LUN, a virtual LUN, and a computer using the virtual LUN (i.e., LUN to logical mapping table) [see Fig. 25 and Col. 25, Line 65 to Col. 26, Line 41].

Regarding claim 23, Blumenau further teaches a computer system according to claim 18, wherein each of said plurality of computers is arranged to load an application program stored in a detected logical unit to a memory unit of the computer and execute the application program (i.e., mount the network disk such as a logical volume in the

storage subsystem containing the host facilities (application program) or load the host

facilities from the host CD-ROM drive) [see Col. 35, Lines 10-20].

Regarding claim 24, Blumenau further teaches a computer system according to

claim 18, wherein said storage system comprises a plurality of logical units including a

shared logical unit accessed from said plurality of computers and a private logical unit

accessed only from a specified one of said plurality of computers, and each of said

plurality of computers is arranged to execute a boot-up process of an OS stored in a

detected shared logical unit using setting information stored in a detected private logical

unit (i.e., volume access table 82 with private and shared flags indicates private/shared

logical volumes) [see Figs. 5 & 22 and Col. 13, Lines 32-57 and Col. 26, Lines 1-41].

Regarding claim 25, Blumenau further teaches a computer system according to

claim 24, wherein said storage system further comprises a LUN management table

designating mutual correspondences between a logical unit and a computer which can

access the logical unit (i.e., volume access and mapping table) [see Figs. 5 & 8-9, and

24-25].

Regarding claims 26-27, Blumenau further teaches a computer system according

to claim 25, further comprising a management console coupled to said plurality of

computers and said storage system, wherein said management console is arranged to

set an attribute of "privileged" to a logical unit in said storage system, a privileged logical

unit being accessible only from said management console, and wherein said

management console is arranged to back up data stored in a privileged logical unit to a

backup device, and wherein said management console is arranged to install a program

in a privileged logical unit (i.e., system administrator at a remote terminal or host could

access the information in the volume access table 80 and volume lists 81 and download

micro-code via a modem or dedicated link or via the data network 21, the administrator

defines the host names and volume names and permits the changes in the

configuration of the data network and this suggests the "privileged" attribute) [see Col.

13, Lines 9-27 and Col. 13, Line 58 to Col. 14, Line 39 and Col.

Regarding claim 28, Blumenau further teaches a computer system according to

claim 24, wherein said storage system comprises a cache memory unit (= cache

memory 32), and said cache memory unit us arranged to hold for transfer data stored in

a shared logical unit preferentially to data stored in a private logical unit [see Fig. 1 and

Col. 7, Lines 10-50].

Claim 29 is rejected under the same rationale set forth above to claim 18. In

addition, Blumenau further teaches user management program (i.e., the host installation

facility of the graphical user interface queries each host controller port for its port WWN)

[see Col. 35, Line 20 to Col. 36, Line 24] and inputted user name (i.e., user login and

password) [see Col. 36, Line 61 to Col. 37, Line 3].

Regarding claims 30-31, Blumenau further teaches a computer system according to claim 29, further comprising a management console coupled to said plurality of computers arid said storage system, said management console having a user LUN management table designating mutual correspondences between a user name and a logical unit which can be accessed by using the corresponding user name, wherein said storage system comprises a LUN management table designating mutual correspondences between a logical unit and a computer which can access the corresponding logical unit, said management console is arranged to receive a user name inputted to a computer and an address of the computer from the computer, confirm a logical unit which can be accessed by using the received user name by referring to said user LUN management tables, and register an ID of the computer corresponding to the received address in said LUN management table in said storage system to make the ID of the computer correspond to the confirmed logical unit and wherein each of said plurality of computers is arranged to detect a logical unit which is registered in said LUN management table with a correspondence to an ID of the detecting computer (i.e., volume access and mapping table includes host ID, group name and LUN to logical volume map) [see Figs. 5 & 8-9 & 23-24 and Col. 33, Line 40 to Col. 34, Line 10 and Col. 35, Line 20 to Col. 36, Line 24].

Regarding claim 32, Blumenau further teaches a computer system according to claim 29, wherein each of said plurality of computers comprises a user LUN management table stored in the memory unit, the user LUN management table

designating mutual correspondences between a user name and a logical unit which can

be accessed by using the corresponding user name, said storage system comprises a

LUN management table designating mutual correspondences between a logical unit

and a computer which can access the logical unit, each of said plurality of computers is

arranged to confirm a logical unit which can be accessed by using the inputted user

name by referring to the user LUN management table, register an ID of the computer in

said LUN management table in said storage system to make the ID correspond to the

confirmed logical unit, and detect an available logical unit which is registered in said

LUN management table with a correspondence to an ID of the detecting computer (i.e.,

volume access and mapping table includes host ID, group name and LUN to logical

volume map and user login and password) [see Figs. 5 & 8-9 & 23-24 and Col. 33, Line

40 to Col. 34, Line 10 and Col. 35, Line 20 to Col. 36, Line 24 and Col. 36, Line 61 to

Col. 37, Line 3].

Regarding claims 33-34, Blumenau further teaches a computer system according

to claim 30, wherein each of said plurality of computers comprises WWN information

stored in the memory unit, which designates a correspondence between the WWN and

a user name, each computer being arranged to convert the inputted user name to a

WWN based on the WWN information, and to detect an available logical unit by using

the WWN and wherein said storage system comprises a LUN management table

designating mutual correspondences between a WWN and a logical unit which can be

accessed by using the WWN, and each of said plurality of computers is arranged to

detect a logical unit by using a WWN corresponding to the inputted user name, the

detected logical unit being registered in said LUN management table with a

correspondence to the WWN (i.e., mapping table includes host ID, group name and

LUN to logical volume map) [see Figs. 5 & 8-9 & 23-24].

7.   Applicant's arguments with respect to claims 18-34 have been considered but are

moot in view of the new ground(s) of rejection.

Other References Cited

8.   The following references cited by the examiner but not relied upon are

considered pertinent to applicant's disclosure.

   A)   Dimitriroff et al, U.S. Pat. No. 6,209,203.

   B)   Blumenau et al, U.S. Pat. No. 6,295,575.

   C)   Ichikawa et al, U. S. Pat. No. 6,484,229.

   D)   Oeda et al, U. S. pat. No. 6,499,075.

   E)   Hubis et al, U.S. Pat. No. 6,343,324.

Conclusion

9.   Applicant's amendment necessitates the new grounds of rejection. Accordingly,

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy

as set forth in 37 CAR 1.136(a).

A SHORTENED STATUTORY PERIOD FOR REPLY TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE MAILING DATE OF THIS ACTION. IN THE EVENT A FIRST REPLY IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CAR 1.136(A) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT, HOWEVER, WILL THE STATUTORY PERIOD FOR REPLY EXPIRE LATER THAN SIX MONTHS FROM THE MAILING DATE OF THIS FINAL ACTION.

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Tran whose telephone number is (703) 308-8767. The Group fax phone number is (703) 872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam, can be reached on (703) 308-6662.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

PBT
Philip Tran
Art Unit 2155
March 05, 2004

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER